Abstract

Described are general means and methods of diagnosing and treating the phenotypic spectrum as well as the overlapping clinical characteristics with several forms of inherited abnormal expression and/or function of the hPXR gene. In particular, polynucleotides of molecular variant hPXR gene which, for example, are associated with insufficient metabolization and/or sensitivity of drugs, and vectors comprising such polynucleotides are provided. Furthermore, host cells comprising such polynucleotides or vectors and their use for the production of variant hPXR proteins are described. In addition, variant hPXR proteins and antibodies specifically recognizing such proteins as well as transgenic non-human animals comprising the above-described polynucleotide or vectors are provided. Described are also methods for identifying and obtaining inhibitors for therapy of disorders related to the malfunction of the hPXR gene as well as methods of diagnosing the status of such disorders. Pharmaceutical and diagnostic compositions comprising the above-described polynucleotides, vectors, proteins, antibodies and inhibitors by the above-described method are provided. Said compositions are particularly useful for diagnosing and treating various diseases with drugs that are substrates, inhibitors or modulators of the hPXR gene product.